

**ABSTRACT OF THE DISCLOSURE**

A distributed matrix wiring assembly uses a distributed matrix module to connect a routing relay module to a payload equipment device over a set of harness wires. The routing relay module is adapted to provide driving signals to the harness wires at a first end. The distributed matrix module is connected to the harness wires at a second end as well as to the payload equipment device. The distributed matrix includes distributed matrix column wires and distributed matrix row wires which are configured to form a distributed matrix having distributed matrix nodes, each distributed matrix node being defined by the unique combination of a distributed matrix column wire and a distributed matrix row wire. Since the distributed matrix nodes form at least a portion of the overall matrix node requirement it is possible to reduce the number of harness wires required.